

ABSTRACT

A surface acoustic wave device is disclosed, which comprises a surface acoustic wave element including a lithium tantalate piezoelectric substrate 10 with one principal surface thereof formed with an IDT electrode 11, a connector electrode 12 and a periphery sealing electrode 13, and a base substrate 2 formed with an electrode 21 for connection to the element connected to the connector electrode 12 through a solder bump component 3 and a periphery sealing conductor film 22 joined to the periphery sealing electrode 13 thorough a solder sealing component 4. For the solder bump component 3 and the solder sealing component 4, a Sn-Sb based or Sn-Ag based lead-free solder containing 90 % or more Sn is used, and the thermal expansion coefficient of the base substrate 2 is set in the range of 9-20 $\mu\text{m}/^\circ\text{C}$. The joining is accomplished with high stability resisting thermal stress due to a difference in thermal expansion coefficient, so that a surface acoustic wave device that can maintain stable connection for a long duration of time can be provided.